Rundong Luo

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Education

Cornell University — Ithaca, NY, United States
Ph.D. in Computer Science — Aug. 2024 – Present

Peking University — Beijing, China
Bachelor of Science in Computer Science and Technology (summa cum laude) — Aug. 2020 – Jun. 2024

Research Experience

Stanford Visual and Learning Lab — Jan. 2023 – Oct. 2023
Advisor: Prof. Jiajun Wu — Stanford University

- Developed a novel framework for unsupervised single-image 3D object discovery, enabling the inference of objects' 3D representations and positions within a scene from a single real image. The method supports applications like 3D object segmentation and scene manipulation.

STRUCT Lab — Apr. 2022 – Jun. 2024
Advisor: Prof. Jiaying Liu — Peking University

- Leveraged low-level vision insights to enhance high-level nighttime tasks, resulting in a zero-shot day-night domain adaptation algorithm combining curve-based adjustment and contrastive learning, accepted at ICCV 2023 for oral presentation.
- Developed a deep concave curve algorithm for low-light image enhancement, significantly improving downstream model performance, published in TPAMI as a first-author paper.

ZERO Lab — Jul. 2021 – Sept. 2022
Advisor: Prof. Yisen Wang — Peking University

- Explored self-supervised learning to enhance model robustness, conducting empirical and theoretical analysis on the impact of data augmentation in adversarial settings. Proposed a dynamic data augmentation schedule that achieved state-of-the-art results across various datasets, leading to a paper accepted at ICLR 2023.

Publications and Manuscripts

* indicates equal contributions

- **Rundong Luo***, Haoran Geng*, Congyue Deng, Puhao Li, Zan Wang, Baoxiong Jia, Leonidas Guibas, and Siyuan Huang. PhysPart: Physically Plausible Part Completion for Interactable Objects. In ECCV workshop on 3D-in-the-Wild, 2024.
- **Rundong Luo***, Hong-Xing Yu*, and Jiajun Wu. Unsupervised Discovery of Object-Centric Neural Fields. arXiv, 2024.
- Wenjing Wang*, **Rundong Luo***, Wenhan Yang, and Jiaying Liu. Unsupervised Illumination Adaptation for Low-Light Vision. TPAMI, 2024.
- **Rundong Luo**, Wenjing Wang, Wenhan Yang, and Jiaying Liu. Similarity Min-Max: Zero-shot Day-Night Domain Adaptation. In ICCV, 2023.
- **Rundong Luo***, Yifei Wang*, and Yisen Wang. Rethinking the Effect of Data Augmentation in Adversarial Contrastive Learning. In ICLR, 2023.

Academic Service

- Conference Reviewer: CVPR 2024–2025, NeurIPS 2024, WACV 2025, ICLR 2025.
- Journal Reviewer: TCSVT, TIP, TOMM.
- Teaching Assistant: 3D Vision (Cornell, 2024 Fall), Practice of Programming in C&C++ (PKU, 2023 Spring).

Selected Honors and Awards

- Outstanding Undergraduate Thesis (Beijing Municipal, 190 awarded at PKU), 2024.
- Excellent Undergraduate Graduate (Beijing Municipal, 34 awarded at PKU), 2024.
- Sensetime Scholarship (awared to 30 AI undergraduates nationwide), 2024.
- Chinese National Scholarship (awarded to top 0.2% undergraduates in China), 2023.